

What Is Claimed Is:

1. A method for checking at least three sensors (191, 192, 193, 194, 195) which detect a measured quantity in the area of an internal combustion engine (100), wherein a measure for the sensor signal (S1, S2, S3, S4, S5) of the particular sensor to be checked (191, 192, 193, 194, 195) is compared to a reference signal (M, S1, S2, S3, S4, S5); the reference signal (M, S1, S2, S3, S4, S5) is obtained from at least one part of the sensor signals (S1, S2, S3, S4, S5) of the sensors to be checked (191, 192, 193, 194, 195); and a sensor (191, 192, 193, 194, 195) is recognized as defective on the basis of a comparison of the measure for the sensor signal (S1, S2, S3, S4, S5) and the reference signal (M, S1, S2, S3, S4, S5).
2. The method as recited in Claim 1, wherein the reference signal (M, S1, S2, S3, S4, S5) is formed from a mean value (M) of a measure of the sensor signals (S1, S2, S3, S4, S5) of at least one part of the sensors to be checked (191, 192, 193, 194, 195)
3. A method as recited in Claim 2, wherein each of the sensor signals (S1, S2, S3, S4, S5) is weighted with a predefined factor (K1, K2, K3, K4, K5) when forming the mean value.
4. The method as recited in Claim 1, wherein a sensor (191, 192, 193, 194, 195) is recognized as defective if the difference (Dn, D1, D2, D3) between the measure of the sensor signal (S1, S2, S3, S4, S5) and the reference signal (M, S1, S2, S3, S4, S5) exceeds a predefined threshold value (SW, SW1, SW2, SW3).
5. The method as recited in Claim 1, wherein the particular sensor (191, 192, 193, 194, 195) whose measure for the sensor

signal (S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub>, S<sub>5</sub>) is the farthest from the reference signal (M, S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub>, S<sub>5</sub>) is recognized as defective.

6. The method as recited in Claim 1, wherein the reference signal (M, S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub>, S<sub>5</sub>) is obtained from a measure of a sensor signal (S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub>, S<sub>5</sub>) of a single sensor (191, 192, 193, 194, 195) to be checked.

7. The method as recited in Claim 1, wherein the check is performed in a steady-state operation or at a standstill or after a cold start of the internal combustion engine (100).

8. The method as recited in Claim 7, wherein the standstill of the internal combustion engine (100) is detected; a timer is provided which is started when a standstill is detected, and the check is provided after the elapse of a predefined time period.

9. The method as recited in Claim 7, wherein the steady-state operation or the standstill or the cold start of the internal combustion engine (110) is detected on the basis of a comparison between a sensor signal (S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub>, S<sub>5</sub>) of at least one selected sensor (191, 192, 193, 194, 195) which has a slow rate of change and a sensor signal (S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub>, S<sub>5</sub>) of a sensor (191, 192, 193, 194, 195) to be checked.

10. The method as recited in Claim 1, wherein the sensor signal (S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub>, S<sub>5</sub>) of a sensor (191, 192, 193, 194, 195) recognized as defective is not taken into account in determining the reference signal (M, S<sub>1</sub>, S<sub>2</sub>, S<sub>3</sub>, S<sub>4</sub>, S<sub>5</sub>).

11. The method as recited in Claim 1, wherein no check is performed if the number of sensors (191, 192, 193, 194, 195) recognized as defective exceeds a predefined number.

12. The method as recited in Claim 1, wherein the measured quantity is a temperature.